

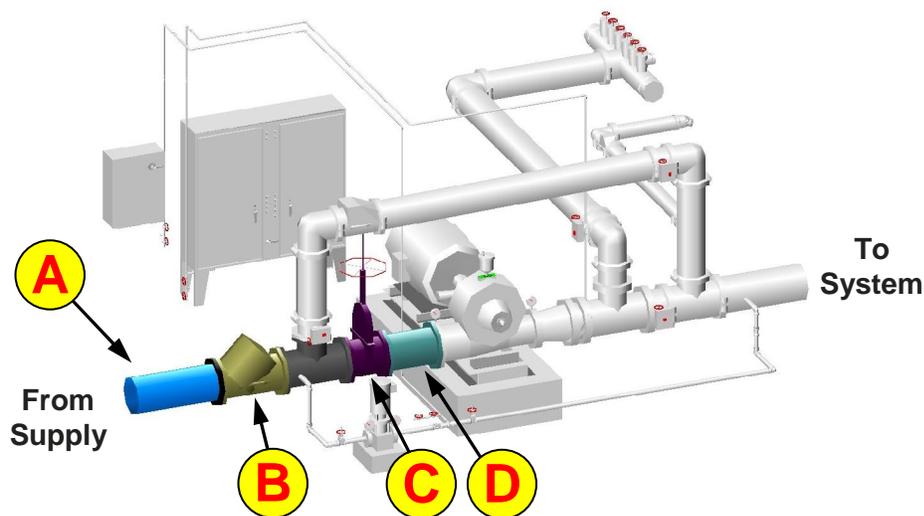


QUICK RESPONSE

Saving life and property through effective licensing, plan review,
and inspection of fire protection systems.

May 2008

FIRE PUMPS – SUCTION COMPONENTS



A = Suction Pipe – NFPA 20, Section 5.14.3.4, “The size of that portion of the suction pipe located within 10 pipe diameters upstream of the pump suction flange shall be not less than that specified in Section 5.25.”

B = Check Valve (when required) – NFPA 20, Section 5.26.3, “Where located in the suction pipe of the pump, check valves and backflow prevention devices or assemblies shall be located a minimum of 10 pipe diameters from the pump suction flange.” The 10 times the pipe diameter requirement is to minimize the turbulence created by the check valve.

C = Control Valve (always required) – NFPA 20, Section 5.14.5.1, “A listed outside screw and yoke (OS&Y) gate valve shall be installed in the suction pipe.” This valve must be an OS&Y because these types of valves do not create turbulence when in the fully open position.

D = Eccentric Reducer (when required) – NFPA 20, Section 5.14.6.4, “Where the suction pipe and pump suction flange are not of the same size, they shall be connected with an eccentric tapered reducer or increaser installed in such a way as to avoid air pockets.” When the size of the suction piping is different than the suction flange of the pump an eccentric reducer needs to be installed. An eccentric reducer differs from a concentric reducer in that the centerlines of the openings on each end of the fitting do not line up. To avoid air being trapped, the eccentric reducer is to be installed with the flat side up.

